

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for preparing polyolefins comprising

(I) prepolymerising a supported olefin polymerization catalyst with an olefin or olefin mixture wherein the pre-polymerization olefin or olefin mixture is one or more of 1-butene, 3-methyl-1-butene, 3,3-dimethyl-1-butene, 4-methyl-1-pentene, 4,4-dimethyl-1-pentene, 4,5-dimethyl-1-hexene, vinyl cyclopentane, vinyl cyclohexane, vinyl cycloheptane, allyl cyclopentane, allyl cyclohexane or allyl cycloheptane;

(II) isolating the resulting prepolymerised olefin polymerisation catalyst; and

(III) polymerising or copolymerising olefins in the presence of the prepolymerised olefin polymerisation catalyst;

wherein the olefin or olefin mixture of the prepolymerisation is different from that of the subsequent olefin polymerisation or copolymerisation, wherein the melting point or softening point of the polyolefin or olefin copolymer resulting from prepolymerisation is at least 20°C higher than the melting point or softening point of the polyolefin or olefin copolymer of the subsequent olefin polymerisation and wherein said olefin polymerisation catalyst is a metallocene.

2. (Original) A process as claimed in claim 1 wherein the melting point or softening point of the polyolefin or olefin copolymer resulting from prepolymerisation is

at least 30°C higher than the melting point or softening point of the polyolefin or olefin copolymer of the subsequent olefin polymerisation.

3. (Currently Amended) The process as claimed in claim 1 ~~comprising~~ wherein the polymerization catalyst is two or more metallocenes forming a multi-site catalyst.

4. Canceled.

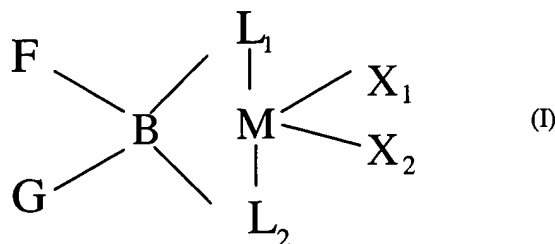
5. (Original) The process as claimed in claim 4 wherein the pre-polymerization olefin or olefin mixture is one or more of 3-methyl-1-butene, 4-methyl-1-pentene, vinyl cyclopentane or vinyl cyclohexane.

6. (Previously Presented) The process as claimed in claim 1 wherein the support material is silica.

7. (Currently Amended) The process as claimed in claim 1 wherein said olefin polymerisation catalyst is a supported metallocene catalyst, comprising

A) 90.0 – 99.9 parts by weight of a catalyst support ~~based on~~ comprising a hydrophilic inorganic oxide of an element of main groups II to IV or transition group IV of the Periodic Table or a mixture or mixed oxide thereof, which catalyst support is ~~obtainable~~ obtained by simultaneous reaction with aluminoxanes and with polyfunctional organic crosslinkers reacted with the inorganic oxide to form the catalyst support,

B) 10 – 0.1 parts by weight of a metallocene compound of the formula I



where

M is a metal selected from the group consisting of Ti, Zr, Hf, V, Nb and Ta or an element selected from the group consisting of the lanthanides,

X₁ and X₂ are identical or different and are each a C₁-C₁₀-alkyl group, a C₁-C₁₀-alkoxy group, a C₅-C₁₀-aryl group, a C₆-C₁₀-aryloxy group, a C₂-C₁₀-alkenyl group, a C₇-C₂₀-alkylaryl group, a C₇-C₂₀-arylalkyl group, a C₈-C₂₀-arylalkenyl group, hydrogen or a halogen atom,

L₁ and L₂ are identical or different and are each an unsubstituted, monosubstituted or polysubstituted monocyclic or polycyclic hydrocarbon radical containing at least one cyclopentadienyl unit which can form a sandwich structure with M,

R is carbon, silicon, germanium or tin,

F and G are identical or different and are each a trimethylsilyl radical of the formula -Si(CH₃)₃, where G may also be a C₁-C₁₀ alkyl radical, preferably a C₁-C₄-alkyl radical, or a C₆-C₁₀-aryl radical,

~~characterized in that~~ wherein the supported metallocene catalyst, comprising A and B, has an activity of maximum 100 kg, ~~preferably maximum 50 kg, particularly preferred maximum 20 kg~~ polyolefin/g supported catalyst/h.

8. (Previously Presented) The process as claimed in claim 1, wherein the pre-polymerization is carried out in gas phase.

9. (Previously Presented) The process as claimed in claim 1, wherein the pre-polymerization is slurry phase polymerization in an oil or grease slurry medium.

10. (Currently Amended) The process as claimed in claim 2 ~~comprising~~wherein the metallocene catalyst comprises two or more metallocenes forming a multi-site catalyst.

11. Canceled.

12. Canceled.

13. Canceled.

14. (Previously Presented) The process as claimed in claim 7, wherein the pre-polymerization is carried out in gas phase.

15. (Previously Presented) The process as claimed in claim 7, wherein the pre-polymerization is slurry phase polymerization in an oil or grease slurry medium.

16. (New) The process as claimed in claim 1, wherein for the liquid-phase polymerisation of polypropylene, in step (I) the supported catalyst is pre-polymerized with 4-methyl-1-pentene.

17. (New) A method of reducing reactor fouling during an olefin polymerisation comprising

(I) prepolymerising a supported olefin polymerisation catalyst with an olefin or olefin mixture wherein the pre-polymerisation olefin or olefin mixture is one or more of

1-butene, 3-methyl-1-butene, 3,3-dimethyl-1-butene, 4-methyl-1-pentene, 4,4-dimethyl-1-pentene, 4,5-dimethyl-1-hexene, vinyl cyclopentane, vinyl cyclohexane, vinyl cycloheptane, allyl cyclopentane, allyl cyclohexane or allyl cycloheptane;

(II) isolating the resulting prepolymerised olefin polymerisation catalyst; and

(III) polymerising or copolymerising olefins in the presence of the prepolymerised olefin polymerisation catalyst;

wherein the olefin or olefin mixture of the prepolymerisation is different from that of the subsequent olefin polymerisation or copolymerisation, and wherein the melting point or softening point of the polyolefin or olefin copolymer resulting from prepolymerisation is at least 20°C higher than the melting point or softening point of the polyolefin or olefin copolymer of the subsequent olefin polymerisation.